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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,808

03/17/2004

John A. Hossack

2005P15319US

5602

28524

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03/31/2009

SIEMENS CORPORATION  
INTELLECTUAL PROPERTY DEPARTMENT  
170 WOOD AVENUE SOUTH  
ISELIN, NJ 08830

EXAMINER

LAURITZEN, AMANDA L

ART UNIT

PAPER NUMBER

3737

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DELIVERY MODE

03/31/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/803,808	<b>Applicant(s)</b> HOSSACK ET AL.	
	<b>Examiner</b> Amanda L. Lauritzen	<b>Art Unit</b> 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 22 December 2008 have been fully considered but they are not persuasive and/or are moot in view of new grounds of rejection.

The transducer of Bank et al. does in fact include a reactance characteristic and an operating frequency range (abstract; [0006]; [0009]; [0010]) and it is identified such that the reactive load is counterbalanced in execution of the method, as in [0012]. At least one signal path is electrically coupled to the ultrasonic transducer such that it is operative. The transducer, while in the form of a loudspeaker, is ultrasonic and does include a receive signal path as the speaker functions by converting electrical energy into ultrasonic vibratory signals. The electric coupling is understood to be a receive signal path, as the receive signal and its associated path are not otherwise characterized by the claim(s). The remarks are directed to signal *reception*, but the claim(s) cite merely a receive signal, and these terms have been interpreted to have different meaning.

### ***Priority***

Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

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***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-15, 16-30, 31-32, 33-34, 35-38 and 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Banks et al. (US 2004/0047477, now US 7,319,763).

Banks et al teach a method of tuning a transducer circuit comprising steps of identifying an ultrasonic transducer circuit having a reactance characteristic and an operating frequency range ([0002] describing a frequency range and a shift provided by a balancing frequency, [0064] for use with an ultrasonic frequency range), and at least one signal path that is electrically coupled to the transducer(s), provided with a balancing circuit to balance the reactance characteristic of the ultrasonic transducer over the operating frequency range (a reactive matching network is provided to counteract the reactance of the transducer at the carrier frequency [0075-0079]). The reactance characteristic of the transducer is identified in the method such that the reactive load is counterbalanced in execution of the method, as in [0012]. At least one signal path is electrically coupled to the ultrasonic transducer such that it is operative. The transducer includes a receive signal path in the form of an electronic coupling effective for receiving an electrical signal for conversion to a vibratory signal with an audible output [0002]. This electric coupling is understood to be a receive signal path, as the receive signal and its associated path are not otherwise characterized by the claim(s).

The reactance here is inherently a capacitance of the ultrasonic transducer and includes a negative reactance [0075]. An added inductance is placed between the amplifier and the transducer to provide a positive reactance which counterbalances the negative reactance of the transducer capacitance [0075]; [0012]. A feedback amplifier (including an op amp and known to include any of a network of feedback resistors) is provided with the negative capacitance [0053], [0069], [0084]. The balancing circuit includes a plurality of switch devices and a set of transistors [0058], [0060]. An inductance is disclosed as an optional means for balancing the negative reactance of the ultrasonic transducer over the frequency range [0075].

The electrostatic transducer(s) used in the circuit are understood to include first and second electrodes, one being fixed and one being moveable, with the transmit and receive signal paths coupled to one of each of the electrodes, respectively [0087]. The electrodes of an electrostatic transducer correspond to one of a high voltage signal path and a low voltage signal path that produce a change in the applied voltage in proportion to the amplitude of motion of the electrode. The high/low voltage configuration of the electrodes is shown in Fig. 2 and described at [0058]-[0059]. The capacitor is inserted into the low voltage signal path to balance a reactance characteristic. An inductance is optionally provided for reactive load matching.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re*

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*Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-15, 16-30, 31-32, 33-34, 35-38 and 39-42 rejected on the ground of

nonstatutory obviousness-type double patenting as being unpatentable over claims 1-46 of U.S.

Patent No. 6,726,626. Although the conflicting claims are not identical, they are not patentably distinct from each other because each is directed to a method of tuning a transducer circuit and/or to the specifics of the transducer circuit device, with the instant claims being broader and therefore anticipated by the conflicting claims. The instant claims are broader in that the claims are not specific to a capacitive electrostatic (or micro fabricated) transducer and the capacitance and inductance are not prescribed in series or parallel configuration(s) as claimed in the conflicting application.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amanda L. Lauritzen whose telephone number is (571)272-4303. The examiner can normally be reached on Monday - Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian L. Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Amanda L. Lauritzen/  
Examiner, Art Unit 3737

/BRIAN CASLER/  
Supervisory Patent Examiner, Art Unit  
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